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(Modified) PTO/SB/08A-B (10-96)
Approved for use through 10/31/99. OMB 0651-0031

Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Complete if Known <u>10/773,601</u>	
	Application Number	10/103,450 <u>not yet known</u>
	Filing Date	March 20, 2002 <u>February 6, 2004</u>
	First Named Inventor	<u>Minto Hiroshi Kumagai</u>
	Group Art Unit	<u>1636</u>
	Examiner Name	<u>Terry Alan McKelvey</u>
	Attorney Docket Number	60-002239US <u>60-002234US</u>
Date Submitted	February 27, 2003 <u>February 6, 2004</u>	

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
<u>DMC</u>	AA	5,316,930		Loesch-Fries et al.	05/31/1994	
<u>J</u>	AB	5,316,931		Donson et al.	05/31/1994	
<u>✓</u>	AC	5,922,602		Kumagai et al.	07/13/1999	

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Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T
DMC	AD	Helene et al., Biochim. Et Biophys. Acta, 1990, vol. 1049, pp. 99-125			
	AE	French et al., Science, vol. 231, pp. 1294-1297			
	AF	Brisson et al., Expression of a bacterial gene in plants by using a viral vector, Nature, vol. 310, August 9, 1984			
	AG	Lehto et al., Virology, 1990, vol. 175, pp. 30-40.			
	AH	Stein et al., Science, Aug. 20, 1993, vol. 261, pp. 1004-1011.			

Examiner Signature	<u>Terry A. McKelvey</u>	Date Considered	<u>7/25/04</u>
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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10/773,601
Pat. No. known

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO. 60-008284US
8129-000-333 60-002233USSERIAL NO.
10/103,450
00/200,546

APPLICANT

Kumagai et al.

FILING DATE

June 10, 1994

March 20, 2002
February 6, 2004

GROUP

AHA-1636

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Jmc	AA	5,107,065	April 21, 1992	Anti-Sense Regulation of Gene Expression in Plant Cells			
↓	AB	5,231,020	July 27, 1993	Genetic Engineering of Novel Plant Phenotypes			

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
Jmc	AC	WO 93/03161	February 18, 1993	PCT				

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Jmc	AD	Rothstein, Steven J. et al. "Stable and heritable inhibition of the expression of nopaline synthase in tobacco expressing antisense RNA". <u>Proceedings of the National Academy of Sciences, USA</u> 84:8439-8443 (1987).
↓	AE	Smith, C.J.S. et al. "Antisense RNA inhibition of polygalacturonase gene expression in transgenic tomatoes". <u>Nature</u> 334: 724-726 (1988).
↓	AF	Jorgensen, Richard. "Altered gene expression in plants due to <i>trans</i> interactions between homologous genes". <u>Tibtech</u> , Vol 8: 340-344 (1990).
	AG	Grierson, Don et al. "Does co-suppression of sense genes in transgenic plants involve antisense RNA?" <u>Tibtech</u> Vol. 9: 122-123 (1991). duplicate (see pg 7)
	AH	Bird, Colin R. et al. "Using Antisense RNA To Study Gene Function: Inhibition Of Carotenoid Biosynthesis In Transgenic Tomatoes". <u>Bio/Technology</u> , Vol 9: 636-639 (1991). duplicate (page 7)
	AI	Bartley, Glenn E. et al. "Molecular cloning and expression in photosynthetic bacteria of a soybean cDNA coding for phytylene desaturase, an enzyme of the carotenoid biosynthesis pathway". <u>Proceedings of the National Academy of Sciences, USA</u> 88: 8532-8536 (1991). duplicate (page 7)
	AJ	Bartley, Glenn E. et al. "A Tomato Gene Expressed during Fruit Ripening Encodes an Enzyme of the Carotenoid Biosynthesis Pathway". <u>The American Society for Biochemistry and Molecular Biology, Inc.</u> Vol. 267, No. 8: 5036-5039 (1992). duplicate (pg 7)

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AK	Donson, J. et al. "Systemic expression of a bacterial gene by a tobacco mosaic virus-based vector". <u>Proceedings of the National Academy of Sciences, USA</u> , Vol. 88: 7204-7208 (1991).
AL	Packer, Iris et al. "A single polypeptide catalyzing the conversion of phytoene to β -carotene is transcriptionally regulated during tomato fruit ripening". <u>Proceedings of the National Academy of Sciences, USA</u> Vol. 89: 4962-4966 (1992).
AM	Gray, Julie et al. "Molecular biology of fruit ripening and its manipulation with antisense genes". <u>Plant Molecular Biology</u> 19: 69-87 (1992).
AN	Scolnik, Pablo and Bartley Glenn E. "Phytoene Desaturase from <i>Arabidopsis</i> ". <u>Plant Physiology</u> 103: 1475 (1993).
AO	Giullano, Giovanni et al. "Regulation of Carotenoid Biosynthesis during Tomato Development". <u>The Plant Cell</u> , Vol. 5:379-387 (1993).
AP	Dogbo, Odette et al. "Carotenoid biosynthesis: Isolation and characterization of a bifunctional enzyme catalyzing the synthesis of phytoene". <u>Proceedings of the National Academy of Sciences, USA</u> 85: 7054-7058 (1988).
AQ	van der Krol, Alexander R. et al. "An anti-sense chalcone synthase gene in transgenic plants inhibits flower pigmentation". <u>Nature</u> 333: 866-869 (1988).
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Sheet 1 of 1

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Dr. Vel. Brown

ATTY. DOCKET NO. 60-002239US

SERIAL NO. 10/103,450

8129-006-900 60-002233US

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SUPPLEMENTAL LIST OF REFERENCES CITED BY APPLICANT

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Kumagai *et al.*

FILING DATE March 20, 2002

GROUP

June 16, 1994 February 6, 2004

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*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
me	AR	WO A 91 13994	19 Sept 1991	PCT				
	AS	WO A 91 13078	5 Sept 1991	PCT				
	AT	WO A 91 09128	27 June 1991	PCT				
	AU	EP A 0 425 004	2 May 1991	EPO				
V	AV	WO A 90 12107	18 Oct 1990	PCT				

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me	AW	Kumagai, <i>et al.</i> , 1995, "Cytoplasmic inhibition of carotenoid biosynthesis with virus-derived RNA," <u>Proc. Nat. Acad. Sci. USA</u> 92(5):1679-1683
	AX	Powers <i>et al.</i> , 1994, "Intracellular Immunization of Mosquito Cells to LaCrosse Virus Using a Recombinant Sindbis Virus Vector," <u>Virus Research</u> 32(1):57-67
	AY	Misawa <i>et al.</i> , 1993, "Functional expression of the <i>Erwinia uredovora</i> carotenoid biosynthesis gene <i>ctrl</i> in transgenic plants showing an increase of beta-carotene biosynthesis activity and resistance to the bleaching herbicide norflurazon," <u>The Plant Journal</u> 4(5):833-840
	AZ	Bramley <i>et al.</i> , 1992, "Biochemical Characterization of Transgenic Tomato Plants in Which Carotenoid Synthesis has been Inhibited Through the Expression of Antisense RNA to pTOM5," <u>The Plant Journal</u> 2(3):343-349
V	BA	Hayes <i>et al.</i> , 1988, "Gene amplification and expression in plants by a replicating geminivirus vector," <u>Nature</u> 334:179-182

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DATE CONSIDERED

Randy A. McKelvey

7/25/04

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Sheet 1 of 1 10/773,601

LIST OF REFERENCES CITED BY APPLICANT

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PTO FORM 1449

ATTY. DOCKET NO.
~~60-0022334~~
60001-0000-0301APPLICATION NO. ~~10/103,460~~
10/103,460
80/266,676

APPLICANT

Monto H. Kumagai, et al.

FILING DATE February 6, 2004
March 20, 2002
March 9, 1998

GROUP

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>DMC</i>	1.	5,539,093	09/23/96	Fitzmaurice, et al.	536	23.2	06/16/94

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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
<i>DMC</i>	2.	EP 00 12 7988	10/15/01	European Search Report			X	
	3.	WO 90/12107	10/18/90	PGT duplicate (ref. AV, page 4)			X	
<i>DMC</i>	4.	WO 90/12084	10/18/90	PCT			X	
	5.	WO 90/13678	09/05/91	PGT duplicate (ref. AS page 4)			X	
	6.	WO 91/09128	06/27/91	PCT duplicate (ref. AT page 4)			X	
	7.	WO 91/13994	09/10/91	PGT duplicate (ref. AR, page 4)			X	
	8.	WO 93/03161	02/18/93	PGT duplicate (ref. AC, page 2)			X	
<i>DMC</i>	9.	WO 93/23551	11/25/93	PCT			X	
	10.	EP 0425004A	05/02/91	Europe duplicate (ref. AU, page 4)			X	

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<i>DMC</i>	11.	Bramley, et al., "Biochemical characterization of transgenic tomato plants in which carotenoid synthesis has been inhibited through the expression of antisense RNA to pTOM5", <i>The Plant Journal</i> , 2(3):343-349 (1991)
<i>↓</i>	12.	Fray and Grierson, "Identification and genetic analysis of normal and mutant phytoene synthase genes of tomato by sequencing, complementation and co-suppression", <i>Plant Molecular Biology</i> , 22:589-602 (1993)
	13.	Heyes, et al., "Gene amplification and expression in plants by a replicating geminivirus vector", <i>Nature</i> , 334:179-182 (1988) duplicate (ref. BA page 4)
	14.	Kumagai, et al., "Cytoplasmic inhibition of Carotenoid Biosynthesis with Virus-Derived RNA", <i>Proc. Natl. Acad. Sci USA</i> 92:1670-1683 (1995) duplicate (ref. AW, page 4)
	15.	Misawa, et al., "Functional expression of the <i>Erwinia uredovora</i> carotenoid biosynthesis gene <i>cr1</i> in transgenic plants showing an increase of β -carotene biosynthesis activity and resistance to the bleaching herbicide norflurazon", <i>The Plant Journal</i> , 4(5):833-840 (1993) duplicate (ref. AY, page 4)
	16.	Powers, et al., "Intracellular immunization of mosquito cells to LaCrosse virus using a recombinant Sindbis virus vectors", <i>Virus Research</i> , 32:57-67 (1994) duplicate (ref. AX, page 4)

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Sheet 1 of 2

10/773,601

<p>LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)</p> <p>PTO FORM 1449</p> <p>COPY FROM PARENT</p>	<p>ATTY. DOCKET NO. <u>60-002234US</u> 60-002234US 008010086US01</p>	<p>APPLICATION NO. <u>10/103,450</u> 10/103,450 00/260,546</p>
	<p>APPLICANT Monto KUMAGAI, et al.</p>	
	<p>FILING DATE <u>February 6, 2004</u> March 20, 2002 June 18, 1994</p>	<p>GROUP <u>1636</u> 1605</p>

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*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>JMC</i>	5,107,065	04-21-1992	Shewmaker, et al.			
	5,231,020	07-27-1993	Jorgensen, et al.	<i>duplicate (see AB page 2)</i>		

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		COUNTRY	CLASS	SUBCLASS	TRANSLATION
					YES NO
<i>JMC</i>	WO 91/13994	09-19-1991	PCT		
	WO 93/03101	02-10-1993	<i>PCT duplicate of AC, page 2</i>		

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>JMC</i>	Bartley, et al., "A Tomato Gene Expressed during Fruit Ripening Encodes an Enzyme of the Carotenoid Biosynthesis Pathway," <i>Biol. Chem.</i> <u>267</u> (8):5036-5039 (1992)
	Bird, et al., "Using Antisense RNA to Study Gene Function: Inhibition of Carotenoid Biosynthesis in Transgenic Tomatoes," <i>Bio/Technology</i> <u>9</u> :635-639 (1991)
	Dawson, et al., "Regulation of Tobamovirus Gene Expression," <i>Adv. Virus Res.</i> <u>38</u> :307-341 (1990)
<i>✓</i>	Dawson, W.O., et al., "cDNA cloning of the complete genome of tobacco mosaic virus and production of infectious transcripts," <i>Proc. Natl. Acad. Sci. USA</i> <u>83</u> :1832-1836 (1986)
	Dawson, et al., "Systemic expression of a bacterial gene by a tobacco mosaic virus-based vector," <i>Proc. Natl. Acad. Sci. USA</i> <u>88</u> :7204-7208 (1991) <i>duplicate (AK page 3)</i>
	Gray, et al., "Molecular biology of fruit ripening and its manipulation with antisense genes," <i>Plant Mol. Bio.</i> <u>19</u> :69-87 (1992) <i>duplicate (AM, page 3)</i>
<i>JMC</i>	Grierson, et al., "Does co-suppression of sense genes in transgenic plants involve antisense RNA?" <i>Trends in Biotech.</i> <u>9</u> :122-123 (1991)
<i>✓</i>	Kumagai, et al., "Rapid high-level expression of biologically active α -trichosanthin in transfected plants by an RNA viral vector," <i>Proc. Natl. Acad. Sci. USA</i> <u>90</u> :427-430 (1993)

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		APPLICANT Monto KUMAGAI, et al.	
		FILING DATE <u>February 6, 2004</u> <u>March 20, 2002</u> June 16, 1994	GROUP <u>1636</u> 1803
<u>DMC</u>		Mol, et al., "Regulation of plant gene expression by antisense RNA," <i>FEBS Lett.</i> <u>268</u> :427-430 (1990)	
<u>↓</u>		Napoli, C., et al., "Introduction of a Chimeric Chalcone Synthase Gene into Petunia Results in Reversible Co-Suppression of Homologous Genes in trans," <i>Plant Cell</i> <u>2</u> :279-289 (1990)	
		Pecker, et al., "A single polypeptide catalyzing the conversion of phytoene to ζ -carotene is transcriptionally regulated during tomato fruit ripening," <i>Proc. Natl. Acad. Sci. USA</i> , <u>89</u> :4962-4966 (1992) — duplicate (pgs 2, re AL)	
		Bolhstein, et al., "Stable and heritable inhibition of the expression of nopaline synthase in tobacco expressing antisense RNA," <i>Proc. Natl. Acad. Sci. USA</i> <u>84</u> :8430-8443 (1987) (duplicate/AD pgs 2)	
		Scolnick and Bartley, "Phytoene Desaturase from Arabidopsis," <i>Plant Physiol.</i> <u>103</u> :1475 (1993) duplicate (AN pgs 3)	
		Smith, et al., "Antisense RNA inhibition of polygalacturonase gene expression in transgenic tomatoes," <i>Nature</i> <u>334</u> :724-726 (1988) — (duplicate/AE)	
<u>DMC</u>		Van der Krol, A.R., et al., "An anti-sense chalcone synthase gene in transgenic plants inhibits flower pigmentation," <i>Nature</i> <u>333</u> :866-869 (1988)	
<u>↓</u>		Van der Krol, A.R., et al., "Modulation of Eukaryotic Gene Expression by Complementary RNA or DNA Sequences," <i>BioTechniques</i> <u>6</u> (10):958-976 (1988)	

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PTO/SB/08A (04-03)

Approved for use through 04/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A-B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Complete if Known 10/773, 601	
	Application Number	10/103,450 Not Yet Known
	Filing Date	March 20, 2002 February 6, 2004
	First Named Inventor	Monto Hiroshi Kumagai
	Group Art Unit	1636
	Examiner Name	Terry Alan McKelvey
	Attorney Docket Number	60-002233US 60-002234US
Date Submitted	September 2, 2003 February 6, 2004	

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appear
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		Office	Number	Kind Code (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
me	1	AOYAGI et al., "Nucleotide sequence of the tobacco mosaic virus (tomato strain) genome and comparison with the common strain genome," J.Biochem., 96(6):1915-23; 1984.	
↓	2	International Committee on Taxonomy of Viruses (ICTV) "00.071.0.01 Tobamovirus: Tobacco mosaic virus (TMV)" Pages 1-5. http://www.ictvdb.rothamsted.ac.uk/ictv/fs_tobam.htm .	
↓	3	X02144: Tobacco Mosaic virus tomato strain; gi:62128.	

Examiner Signature	<i>Terry Alan McKelvey</i>	Date Considered	7/25/04
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Notice of References Cited
(892)Application/Control No.
Not yet known
10/103,450Applicant(s)/Patent Under
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Page 1 of 1

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✓	A	US-5,231,020	07-1993	Jorgensen et al,	435/472.3
	B	US-5,316,931	06-1994	Denson et al <i>dup ref.</i>	435/172.3
	C	US-5,022,682	07-1999	Kumagai et al, <i>dup ref.</i>	435/468
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
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	L	US-			
	M	US-			

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✓	V	Julie Gray et al, Molecular biology of fruit ripening and its manipulation with antisense genes, APlant Molecular Biology 19: 69-87. 1992.
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Terry A. Mckelvey 7/25/04